

Street / Sanitation / Recycling 705 South River Road West Lafayette, IN 47906

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June 22, 2009

TO: Mayor Dennis and West Lafayette Board of Works Members

FROM: David A. Downey, Street Commissioner

RE: Specification for One (1) New 2010 Tandem Cab and Chassis

Equipped with Hook Hoist and Automatic Tarping System

It is requested that you approve the following specification for one (1) new 2010 tandem cab and chassis equipped as per attached bid specifications.

Optional Trade-in:

1996 Ford Chassis with Galbreath Hook Serial # 1FDZY82E0TVA2761

It is also requested that the Clerk-Treasurer set publish and bid opening date.

CC: Sana Booker, Member Brad Marley, Member Judith Rhodes, Clerk-Treasurer File General: Specifications for new 2010 tandem cab and chassis with 60,000 pound capacity hook hoist and automatic tarping system. Unit is to be bid as One Complete Unit. (Reference within the specs to a brand name or manufacturer's name or specs is for reference only, and may be supplied with an approved substitute of equal or better quality). Equipment that is bid pursuant to these specifications shall be of equal quality and size, or greater, to those referenced, and are subject to approval by the purchaser. These are minimum specifications. Bidder must address compliance section. If any part of an item that is not in compliance than that item must be marked "no" an explanation can be provided on a separate sheet with the benefits of that item to the county. A "no" will not automatically exclude a bid. It will be up to the purchasers discretion on what items will be termed equal. Any items not listed on the exception sheet will be assumed to be part of the unit. Bidders must submit with their bid a complete specification on the unit they propose to furnish. Original copies of vehicle specifications and literature must be provided with the bid. Fax copies or unreadable copies of literature or specifications will not be allowed.

Bidder shall complete the right hand column of the specifications. The Bidder shall also specifically mention those items where the unit being bid does not meet the Owners minimum requirements at the bottom of the page where that item is mentioned. It is brought to the attention of the Bidder that not meeting the Owner's minimum requirements does not necessarily mean that the bid will be rejected. The degree to which the unit conforms to the specifications will be considered in the Owner's evaluation of the bids.

The successful Bidder shall indemnify and save harmless the local agency from any and all suits, costs and penalties or claims for infringements by reason of any patented designs, devices, or materials or any trademark or copyright in connection with the specific unit furnished under this proposal at anytime during manufacture and after purchase of the specified unit(s).

<u>Term "or Equal":</u> Where the term "or equal" is used in these specifications and Bidder deviated from the specified item, he shall file (with his bid) a letter fully explaining and justifying his proposed article or equal.

Acceptance of Unit: Payment for the above vehicle shall be made after the completed unit is delivered to the West Lafayette Street Department and after the authorized representative of West Lafayette Street Department have given approval of the satisfactory delivery and operation of said unit(s).

A certificate of origin shall be furnished with each unit as it is delivered.

The purchaser reserves the right to reject any or all bids.

Minimum Specifications for Chassis	Compliance
Chassis length shall meet needs of hoist manufacturer's tarp system and front mount PTO system.	Yes No
Base Chassis—6X4 with 252 inch wheel base 185- inch cab to axle, 75-inch axle to frame.	
Frame Rail -heat treated alloy steel. Single Rail (120,000 PSI yield) 10.125"x 3.580"x .312"	Yes No
Frame Reinforcement, outer "C" channel, heat treated, alloy steel (120,000 PSI steel)	Yes No
10.813" x3.892" x0.312" continuous front bumper to tail lights, without any alterations or	
modifications Min. two rail strength 3,806,400 RBM, Section Modulus 31.72	
Crossmember, Front for hydraulic pump, mounting flange to accommodate pump	Yes No
Frame Extension, Front Integral, With "C" channel reinforcement, 20" in front of grille	Yes No
Front Bumper, Steel Swept Back	Yes No
Axle-frontnon-driving Dana Spicer wide track I-beam type, 20,000lb. Capacity or Equal	Yes No
To include:	
Multi-leaf, Shackle Type 20,000-lb Capacity with Shock Absorbers Springs,	
The Cab to Chassis Mounting System shall remain attached to the Vehicle Chassis and in an	☐Yes ☐No
orientation similar to its original position when subjected to 20g deceleration load in a forward	
direction, Components in the mounting system may become distorted or broken but never dislodged	

from the original mounting location.	
BRAKES	
Air dual system for straight truck application includes:	Yes No
air compressor air supply and supply line brake chambers, spring (4) rear parking	hammed hartwest
Brake lines color-coded nylon	Yes No
Dust shields-rear brake	Yes No
Dust shields-front brake	
Slack adjusters-rear brake, automatic	Yes No
Slack adjusters-front brake, automatic	
Parking brake valve yellow knob, located on dash panel	Yes No
Spring brake modulator valve.	Yes No
Gauge, air pressure-located on dash panel.	Yes No
Air brake -ABS system, 4 channel, full vehicle wheel control	Yes No
Air dryer - Bendix AD9, with heater	Yes No
Drain valve, automatic Bendix DV-2 with heater; for air tank	Yes No
Brakes - front air cam 16.5" x 6.0" to include 24 sq. in. MGM	Yes No
long stroke brake chamber	
Brakes rearair cam 16.5" x 7" to include 30 sq. in. MGM	☐Yes ☐No
long stroke brake chamber	
	Yes No
Air compressor (Bendix TU-FLO 550) 13.2 CFM.	Yes No
	Yes No
STEERING	
Steering column tilting	Yes No
Steering wheel 2-spoke 18" diameter	
Steering gear (Shepard M-100/M-80) Dual Power	
Exhaust system	Yes No
Exhaust system shall meet the needs of the hoist manufacturer and tarp system. Switch for Exhaust 2 position lighted and Latching, on/off type mounted in IP inhibits	Yes No
regeneration as long as switch is in on position	
Tail Pipe (1) Turnback Type, non Bright Finish for Single Exhaust	Yes No
ELECTRICAL SYSTEM	
12 Volt	Yes No
To include:	Yes No
Steel battery box with fiberglass cover, mounted right side behind cab	
Turn signal switch-self canceling, head light dimmer (with flash to pass feature),	Yes No
head lights (2) sealed beam halogen 5" x 7" rectangle.	
Horn-electric single	Yes No
Parking lightintegral with front turn signal and rear tail light.	Yes No
Stop, turn, tail and back-up lights - dual	Yes No
Starter switch electric key operated	Yes No
Running lights (2) day time.	Yes No
Turn signals, front flush mounted-to include reflectors and aux side turn signals,	Yes No
solid-state flashers.	
Pre Trip Light Inspection and Headlights on with Wipers on	Yes No
Windshield wipers, single motor electric. Windshield wiper switch, 2-speed with wash and	Yes No
intermittent feature	
Wiringchassis color coded and continuously numbered	Yes No
Cigarette lighter and Ash Cup or Ashtray Alternator12 volt. 130-amp capacity, and pad mounted. {Leece-Neville LBP2190	Yes No
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Battery System (3) Maintenance Free 12-Volt 1950CCA Total	☐Yes ☐No
Power source Cigarette Lighter type without lighter	Yes No
Radiostandard AM/FM with weather band, clock and dual speakers.	Yes No
Backup alarm electric 102 DBA	Yes No
Auxiliary harness 3.0' for Auxiliary Front Head lights and turn signals for front plow	Yes No
applications	:
Body Builder wiring to back of cab at left frame includes sealed connectors for tail/amber,	Yes No
turn/marker, backup/accessory, ground and sealed connector for stop/turn	
Horn airsingle trumpet.	☐Yes ☐No
Starter 12 volt (heavy duty) less thermal overcrank protection.(Delco 39MT)	☐Yes ☐No
Circuit breakersmanual-reset (main panel), SAE type III with trip indicators,	☐Yes ☐No
this to replace all fuses (except 5 amps).	1
2-Way Radio Wiring Effects; header mounted Wiring with 20-Amp Fuse Protection, Includes Ignition	Yes No
Wire with 5 Amp Fuse, wire ends heat shrink	
Windshield wiper speed control, force wipers to slowest intermittent speed when park	Yes No
brake set and wipers left on for predetermined time.	
Remote power module, for bodybuilder, 6 switches in instrument panel, one power module	Yes No
with 6 channel, 20 amp max. per channel and 80 amp max. output, switches control the	
power thru multiplex wiring, power module mounted inside cab	
Switch, toggle for work light on back of cab (work light furnished by customer)	Yes No
FRONT END	
Tilt hood with stationary grill, chrome, with bug screen/rock guard.	
Hood shall meet the needs of front mount PTO.	Yes No
Fender extensions injection molded PTO	Yes No
PAINT	
Paint, Cab, base coat / clear coat type, white	Yes No
Frame & axles black air tanks, & steps Powder coated black	
ENGINE	
Block heater, engine 120 volt, 1250 watt, to include block heater socket receptacle.	Yes No
Diesel, MaxxForce 10 @ 350HP, 1150 lb-ft. torque @ 1200 rpm, 2200 rpm governed speed	Yes No
To include:	Yes No
Gauge air cleaner restrictionmounted on air cleaner	
Fuel/water separator	
Cold Starting equipment intake manifold electric	
Grid heater with engine EMC control	
Wet type cylinder sleeves	
Cruise control electroniccontrols integral to steering wheel	
Throttle, hand control, 2 speed	
Engine shut down electrickey operated	
Governor road speed electronic	
Engine oil drain plug magnetic	
Oil filter engine oil spin on type	
Damper crankshaft viscous	
Fan, viscous type	
Fuel filter, engine mounted	
Radiator1228 sq. in aluminum radiator core with internal water to oil	Yes No
transmission cooler and 1167 sq. in. charge air cooler. Above Frame Rails	
NO HOLE IN RADIATOR	☐Yes ☐No
To include:	☐Yes ☐No
Anti-freeze, extended life40F (-40C)	

Deareration system with surge tank	
Radiator hoses premium, rubber	
Air cleaner single element with integral snow valve and in cab control, with restriction gauge	☐Yes ☐No
PTO Effects, engine front PTO unit, includes adapter plate on engine front mounted	Yes No
Powder coated engine oil pan	Yes No
TRANSMISSION	
Transmission, Automatic Allison 3000 RDS_P 5 speed with overdrive, On/Off Hwy, includes	Yes No
Oil level sensor, with PTO provision less retarder with 80,000 GVW & GCW max.	
Transmission Shift Control, Allison Push Button	Yes No
Allison Shift Parameter for snow plows, S1 performance in primary, S4 economy in secondary	Yes No
Transmission Oil Synthetic	Yes No
Transmission ECM must be located inside cab	Yes No
REAR AXLE	
Dana Spicer DD46-170HP/R46-170DH, single reduction 46,000 lb. capacity, with lube oil pump, and	☐Yes ☐No
R wheel ends, with driver controlled locking differential in rear-rear axle	
Gear ratio 4.30 to include:	☐Yes ☐No
Magnetic rear axle drain plug	
Axle, to include Powder Divider Lock Air Operated, Cab Control with indicator light	·
Suspension Rear Tandem (Hendrickson HMX 460-54); Walking Beam Type 54" axle spacing; 46,000	
capacities with Rubber end bushings, Transverse Torque Rods, with shock absorbers.	
FUEL TANK	
Top draw, Aluminum, 70 US gal total capacity mounted under cab	Yes No
Left Side, Min.(2) large self cleaning steps, ladder design	
Fuel lines nylon tubing with O-ring snap on quick connect fittings at both ends	Yes No
Fuel/water Separator (Fleetguard) with thermostatic fuel temperature controlled electric	Yes No
heater, and fuel filter with filter restriction/change indicator in a single assembly.	
CAB	I SZ DAT
Conventional steel	Yes No
To include:	Yes No
Clearance marker lights (5) flush mount	
Arm Rests (2)	
Floor covering (rubber-black)	
Coat Hook	
Grab handles (2) Steps (2 steps per door)	
Glass (all windows tinted)	
Gauge cluster to include:	Yes No
Odometer display, miles/trip miles, engine hours/trip hours, fault code read out.	
Warning System, low fuel, low oil pressure, high engine coolant temp. and low	
battery voltage. Washer fluid level. (visual and audible).	
Gauge cluster 6,engine oil pressure (electronic), water temp (electronic) fuel (electronic)	
tachometer (electronic), air pressure, voltmeter	
Seat-driver to include:	Yes No
Air suspension, high back with integral heat rest, Vinyl, isolated with 2-poistion front	
cushion adjustment, -3 to +14 degree seat back adjustment, Single	
chamber air lumbar support, cushion and back bolsters	
Arm Rest, Right, Driver Seat	Yes No
Passenger seat shall be same as driver.	Yes No
Vehicle must comply with SAE J2422 Cab Roof Strength Evaluation	Yes No
Mirrors (2) - Styled; rectangular, 7.09" x 15.75", brackets breakaway type with 102" wide	☐Yes ☐No

spacing, with integral convex both sides, all heated heads, thermostatically controlled, with clearance lights LED, bright finish head & brackets.	
Mirror, Convex, hood mounted (2) Heated left and right sides bright finish	TYes No
Window, Power (2) and power locks, left and right doors	Yes No
Grab handletowel bar type anti-slip rubber inserts for cab entry left and right side	Yes No
Air conditioner with integral heater and defroster, includes APADS, with fresh air filter	Yes No
Cab Interior to include:	Yes No
Dome light center mounted	
Sun visors (2)	
Storage pocket door left and right doors	
Console, Over Head includes Dual Pockets and 2-way Radio Pocket	
Cab insulation, dash, interior and engine cover insulator	
Cab Rear Suspension (air bag type)	Yes No
PAINT	
White	Yes No
Base Coat / Clear Coat	Yes No
WHEELS	
Front disc. 12.25"x22.5" steel, 10 stud with steel hubs	☐Yes ☐No
Rear disc 8.25"x22.5" steel, 10 stud with steel hubs	
Wheel seals front - oil lubricated, included are wheel bearings	
Wheel Guards, Front & Rear Axles	Yes No
Tires (2) front 425/80R22.5 (Goodyear) G-286 load range (L) 20 ply	Yes No
Tires (8) rear 11R22.5 (Goodyear) G-164RTD M&S load range (G) 14 ply	
Safety: Truck and equipment to conform to All State and Federal occupational health and safety	☐Yes ☐No
requirements, including back up warning device.	
LIGHTING:	Yes No
Lighting: lights and reflectors: All lights shall meet federal requirement FMVSS No.108	Yes No
All body wiring shall be in a complete pre built sealed factory wiring harness. Harness shall be fully	Yes No
wrapped to prevent damage and shall require only three leads to tie into chassis lighting system (a simple wire loom will not be accepted). Body builder shall provide a complete wiring schematic of all	
add on light wires upon delivery.	
Fleet ISIS Service Manual and Parts Catalog Web Based at no charge to you for 3 years	Yes No
This is \$5700.00 Value absolutely free for the 1st 3 years.	
Warranty to be Bid as Standard	
Waitanty to be blu as standard	Yes No
	Yes No
	Yes No
	Yes No
Minimum Specifications for Body and Equipment:	
These specifications shall describe a Heavy-Duty Hook Hoist	Compliance
Those specifications chair decembe a fleaty bary flection	
Alternate to these specifications shall be noted separately at the end of the proposal.	
Any items needed to be moved by body company shall NOT VOID OEM warranty. Body	
company accepts responsibility for warranty issues that OEM fails to cover.	

Structural Specifications	
Main Frame: (2) Formed T-1 minimum 110,000 PSI rails with A500 Grade "C" Rectangular Cross	☐Yes ☐No
Tubes	
Jib and Pivot Frame: A514 T-1 and Structural Tubing A500 Grade "C"	Yes No
Tail Pivot Arm: A514 T-1 minimum 110,000 PSI	Yes No
Lower Lift Cylinder Mounting Brackets: 3/4" A36 Inner and 1 1/4" Outer Cylinder Mounting Brackets	☐Yes ☐No
welded to an ASTM A500 Grade "C" Crossmember with a minimum section modulus of 21.2 cubic	
inches specifically designed to secure the 2 ¾" CFRD 1045 91,000 PSI Cylinder Pin.	
Upper Lift Cylinder Mounting Bracket: (2) ½" A572 65,000 PSI Inner and Outer Cylinder Mounting	Yes No
Brackets per side. The outer brackets are attached to the Inner Brackets by two heavy duty ASTM	
A500 Grade C Tubing Crossmembers. The Inner Brackets are directly welded to the Center Jib Tube	
that has a minimum section modulus of 86.89 cubic inches. Both the Outer and Inner Brackets are	
connected directly to the Center Pivot Hinge. The brackets contain two fully welded Cold Finished	
Round Mechanical 1026 72,000 PSI Bushings per side. The assembly in total is specifically designed	
to secure the 2 3/4"CFRD 1045 91,000 PSI Cylinder Pin.	
Jib Wear Strips: A514 T-1 minimum 110,000 PSI	☐Yes ☐No
Cylinder Pins: CFRD 1045 91,000 PSI	Yes No
Hinge Pins: CFRD 1045 91,000 PSI	Yes No
Latch Hooks Springs: Stainless Steel	Yes No
Outboard Supported Upper Lift Shaft	Yes No
Tail Pivot Arm and Pivot Mechanical Interlock	Yes No
Outside Controls: Standard	Yes No
Container Side Roller: Three per Side	Yes No
Rear Rollers: Dual Pivoting Container Guide Rollers	Yes No
Pivot Points: Hardened Steel Bushings and Grease fittings	
REAR HINGE AND APRON ASSEMBLY	
Apron Weldment Assembly Welded to Chassis	Yes No
Four ½" A572 65,000 PSI Rear Hinge Plates welded to the Hoist Rear Apron Assembly	Yes No
	Yes No
4" x 2 ½" Bushings running full hinge length	
Hinge Bushings are Heat Treated	Yes No
2 ½" x 43 ½" CFRD 1045 91,000 PSI Full Length Free Floating Rear Hinge	Yes No
Hinge Bushings are grease grooved with grease Zerks installed for ease of maintenance.	Yes No
Bumper: 5" x 7 9/16" x 95 7/8" Formed Outer Steel Channel with 5" Legs and 12 Ga. 7" x 95 5/8"	☐Yes ☐No
Formed Inner Steel Channel with 3 1/2" Legs Engineered Specifically to hold Clearance, Tail, Brake,	
Backup, Maker, License Plate and Turn Signal Lights.	
Bumper: Recessed Lights Standard	Yes No
Inside Tower: Air controls for Hoist and PTO Switch	Yes No
Fenders: Aluminum Diamond Plate	Yes No
Hoist Props: Dual Safety Props	Yes No
Primed and Painted Black	Yes No
NOTE: All main frames and manufactured components shall be jigged when fabricated to assure	☐Yes ☐No
interchangeability of parts.	

HYDRAULIC SPECIFICATIONS	
Pump: Gear Type, 37.5 G.P.M. @ 1500 RPM	☐Yes ☐No
Valve: Minimum 5000 PSI rated 2 Spool Sectional, 65 G.P.M. with Main Relief with Air Operated	Yes No
Graphite Impregnated Cylinders with Manual Controls Outside.	
Return Oil Filter: Replaceable, 120 G.P.M., 3 Micron with Bypass.	☐Yes ☐No
Oil Reservoir: 50 Gallon Steel reservoir with 3 Micron Air Breather, 3 Micron In Tank Return Filter	Yes No
and Window Type Sight Gage with Temperature Gauge.	
Suction Strainer: Replaceable, 100 Wire Mesh with Built-in Bypass	Yes No
System Total Oil Capacity: 50 Gallons	Yes No
Shutoff Valves: 2" Ball Valve with Zip Tie	Yes No
Hydraulic Fittings: Swivel, O-Ring Fittings and JIC	☐Yes ☐No
Hydraulic Hoses: 4 Wire High Pressure	Yes No
Hose Guards: Metal Spring Hose Guards for required all pivot points	☐Yes ☐No
Hydraulic Tubing: ¾" Min.	☐Yes ☐No
Lift Cylinders: (2) 7" x 3 1/2" x 81" High Pressure Cylinders with Hardened Steel Bushings, Chrome	Yes No
Rods and Built-In Counter Balance Valves	
Oil Reservoir Air Breather: Replaceable 3 Micron	☐Yes ☐No
Hydraulic Oil: Dual Range High Viscosity Oil for Outstanding Cold and Warm Weather	☐Yes ☐No
Performance.	
ELECTRICAL SPECIFICATIONS	Yes No
FMVSS Compliant and CMVSS Compliant	Yes No
Sealed Lights	Yes No
Lights to be rubber mounted	Yes No
Hoist Up Alarm	☐Yes ☐No
TARPING SYSTEM	
Rack 'N Pinion Rollmaster w/ Gantry Framework	Yes No
Gantry	
Vertical movement of Roll Base/rest assembly from 60" to 96"	Yes No
STATIONARY SECTION LEGS- 4" x3" x3/16" A 500B Steel Tube	Yes No
Tarp tube and mounting brackets to facilitate quick tarp replacement	☐Yes ☐No
SPRING LOADED ROLLER ASSEMBLY	
Mounted between Telescopic Pivot Arms	Yes No
3 ½" OD Galvanized Steel Tube	☐Yes ☐No
1" Solid Steel Shaft	☐Yes ☐No
Sealed Ball Bearings	Yes No
TELESCOPIC PIVOT ARMS- "LOW ARM"	
Hydraulically adjustable in length. 36" of adjustment, Cylinder w/ nitride steel	☐Yes ☐No
rod, mounted externally on base arm.	
BASE ARM- 2 ½" sq x ¼" Steel Tube	Yes No
RACK GEAR- T1 Abrasion Resistant Steel	Yes No
PINION GEAR- T1 Abrasion Resistant Steel	Yes No
Moving parts are fully protected and guarded	Yes No
CHASSIS MOUNTING TUBES	

Fabricated Weldmount	_Yes □No
2 ½" sq x ¼" Steel Tube	Yes No
HYDRAULICS	
FLOW DIVERTER	
1 GPM constant flow from control port side, w/ integral	Yes No
PRESSURE RELIEF VALVE	Yes No
CONTED COMPANY MAYAR	Txz LTxz-
COVER CONTROL VALVE	Yes No
Open Center Configuration	Yes No
Triple Manually operated 4 way valves	Yes No
Adjustable Pressure Relief Valve	
FLOW DIVIDER/COMBINER	
Cartridge type. 50/50 division of flow. Accurate to + or – 4% of flow	Yes No
Carriage type. 30/30 division of now. Accurate to + of - 4/8 of now	
ARM MOVEMENT CYLINDERS (RACK & PINION)	
2 ½" Bore x 1 ¼" Rod x 16" stroke	Yes No
Double Acting Chromed Rod Welded and Re-buildable	Yes No
Bounte riching children is close and ice bandalore	
GANTRY LIFT CYLINDER	
2" Bore x 1 ¼" Rod x 36" Stroke	Yes No
Double Action Chromed Rod Welded and Re-buildable	Yes No
FLOW CONTROLS [Yes No
COVER TARP	
Mesh with reinforcing Front & rear	_Yes □No
CONSTRUCTION	
Reinforced 6 feet on both ends	Yes No
Shock cords on both sides	Yes No
Pocket on rear to accept tarp tube for ease of tarp replacement	Yes No
MICCELLANEOLIC	
MISCELLANEOUS All brackets etc. are Fabricated Steel Weldments	Yes No
All brackets etc. are Fabricated Steel Weldments	1 C5140
Optional Trade:	
1996 Ford Chassis with Galbreath Hook Serial # 1FDZY82EOTVA2761	
WARRANTY: Please state manufacturer warranty.	•
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